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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of: Michael D. Zoeckler	Examiner: Harmon, C.R.
Serial No.: 09/818,023	Art Unit: 3721
Filed: March 27, 2001	Attorney Docket No.: 7137 CIP1 (R029 1057)
For: PAPERBOARD CARTONS WITH LAMINATED REINFORCING RIBBONS AND TRANSITIONED SCORES AND METHOD OF MAKING SAME	

AMENDED APPEAL BRIEF IN COMPLIANCE WITH 37 CFR 1.192

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This amended appeal brief is submitted pursuant to 37 C.F.R. 1.192 in support of the Notice of Non-Compliance with 37 CFR 1.192(c) dated October 14, 2003.

REAL PARTY IN INTEREST

The real party in interest in the present application is Riverwood International, Ltd., the assignee of the present application.

RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to Appellant, or Appellant's legal representatives, which will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending Appeal.

STATUS OF CLAIMS

Claims 1-15 and 33-37 are pending in this application and are subject to the present appeal. Claims 16-32 and 38-41 have been canceled as required by the Examiner as drawn to a non-elected invention. A copy of claims 1-15 and 33-37 as currently pending are set forth in the attached Appendix.

STATUS OF AMENDMENTS

On July 10, 2003, Applicant filed an After Final Response to the May 14, 2003 Final Action. In the After Final Response, the Applicant canceled Claims 16-32 and 38-41 as required by the Examiner and submitted remarks directed to the rejections under 35 U.S.C. 103(a). The Examiner mailed an Advisory Action, (Paper No. 14), from the United States Patent and Trademark Office ("PTO") on July 15, 2003, which indicated that the After Final Response had been entered, but did not place the application into a condition for allowance.

SUMMARY OF THE INVENTION

In accordance with 37 CFR § 1.192(c)(5), a concise explanation of the presently claimed invention is set forth below. References to pages and lines of the specification are designated "page: lines".

In the packaging industry, paperboard cartons of various differing designs and constructions have long been used to package a wide variety of articles. In general, paperboard cartons are erected or converted from paperboard blanks that are cut from long webs of paperboard drawn from large rolls. Fold lines are scored in the blanks to define the various panels of the cartons and to aid in the conversion of the blanks into their final carton shapes. Traditionally, the fold lines are formed by an array of thin metal blades known as a "rule" embedded within the head of a platen die cutter or within the drum of a rotary die cutter. These

blades of the rule extend partially into aligned groves or slots formed in a counter plate that underlies a paperboard blank to crease and form scores in the blank. [2:2 – 2:16]

In some cases, such as in beer and soft drink packaging, carton blanks are pre-glued and provided to packagers in the form of substantially flat knocked down sleeves that are erected in a packaging machine into open ended cartons for receiving articles. In other cases, the blanks are provided in a completely flat configuration, in which case the blanks typically are folded around groups of articles and glued by the packaging machine. In either case, the conversion of blanks usually is performed at the time of packaging by specialized conversion stations that are part of large continuous packaging machines. [2:17 – 3:3]

When making paperboard carton blanks from a web of paperboard, the web usually is pre-cut to a specified predetermined width from a wider web of paperboard stock. The pre-cutting of the web to width generally takes place at the paper mill. The width of the web in each case is dictated by the size and shape of the cartons to be made from the web and is specified to the paper mill by a carton fabricator. For example, a web of paperboard stock may have a width of 64 inches whereas a particular carton blank may require a web 48 inches wide. In such an example, a strip of paperboard 16 inches wide (or two strips that total 16 inches in width) typically will be cut from the web of paperboard stock by the paper mill to form the required 48 inch-wide web. These strips, known in the industry as "trim," traditionally have had reduced value and in some cases are sold at low cost for secondary uses such as the making of shirt collar stiffeners used in the garment industry. [3:6 – 3:21]

Additionally, errors by paperboard manufacturers can result in rolls of paperboard web that may be substandard for a variety of reasons and thus not usable in the fabrication of paperboard cartons. In other cases, paperboard webs manufactured for a particular customer may

not meet specifications and thus cannot readily be used. Such substandard and off-spec paperboard is known in the industry as "cull" and has had reduced value, sometimes being reconstituted into pulp for making new paper. In general, the creation of trim and cull has long been a problem as there has been little use for trim and cull in the paperboard carton making industry. [4:1 – 4:10]

In many packaging applications, the cartons into which articles are packaged must exhibit enhanced strength at least in selected regions to contain the articles securely. This is particularly true in cases where the articles are relatively heavy and are stacked atop one another in their cartons for shipment and sale. For example, canned and bottled beverages, which typically may be packaged in groups of 6, 12, or 24, are inherently relatively heavy and typically are stacked several cartons high on pallets for shipment to retail stores. The cartons into which these beverages are packed therefore must be strong enough to hold the groups of cans or bottles securely together and to resist tearing or "blowing out" even when under the substantial weight of several layers of stacked cartons. In other applications, such as, for example, cartons of boxed fruit drinks, the cartons must provide at least some of the strength and rigidity necessary to resist crushing when layers of cartons are stacked atop one another. This is because the individual drink containers lack the rigidity of bottles or cans and cannot themselves bear the entire weight of a stack of cartoned fruit drinks. [4:11 – 5:6]

In applications such as these, traditional paperboard cartons have sometimes proven inadequate to provide the required strength and rigidity. As a result, many packagers have turned to carton materials known in the industry as small flute corrugated and/or micro-flute, and/or B-corrugated material, which are corrugated paper products (all such corrugated material is referred to herein as and included within the definition of "micro-flute"). In general, micro-flute is

fabricated from a core of paper material formed with a large number of relatively small corrugations sandwiched between facing sheets of flat paper. Micro-flute does tend to provide the strength and rigidity required in many packaging applications; however, it also has significant inherent problems and shortcomings including its generally higher price compared to paperboard. In addition, carton blanks made of micro-flute can be more expensive in some weights to ship than paperboard blanks because their greater thickness limits the number of blanks that can be stacked on standard sized pallet. Further, in some cases, specialized conversion machinery is required to convert the blanks to cartons, increasing the cost of the packaging process. Finally, the printing of high quality graphics on micro-flute has sometimes proven to be difficult. Thus, micro-flute has not provided a completely satisfactory solution as a carton making material in packaging applications where enhanced carton strength, rigidity, and printability are required. [5:7 – 6:8]

Attempts have been made to improve the strength and rigidity of paperboard cartons to provide a viable alternative to micro-flute where added strength and rigidity are required. These attempts have included laminating two or more webs or sheets of standard thickness paperboard together to create thicker multi-ply paperboard from which carton blanks can be cut. However, while this approach increases the strength and rigidity of resulting cartons, it essentially results in a doubling of the amount of paperboard required per carton and a consequent increase in material, manufacturing, and shipping costs. Further, the formation of score or fold lines in and the folding of multiple ply paperboard cartons can be problematic due to the added thickness of paperboard that must be folded. For these and other reasons, such multi-layer laminated paperboard has not proven to be an acceptable alternative to micro-flute. [6:9 – 6:23]

Other attempts to provide alternatives to micro-flute have included the separate fabrication of custom stiffening inserts, which are installed in individual cartons after the cartons are converted from carton blanks. Such inserts have been used, for example, in detergent cartons to provide added strength for stacking and an internal moisture barrier and in beverage cartons to provide separators. However, installing inserts requires expensive specialized machinery, increases material and packaging costs, and can slow the packaging process significantly. [7:1 – 7:10]

A further problem with cartons in general, including micro-flute and paperboard cartons, is that they tend to tear and fail in areas of particularly high stress such as in certain corners of the cartons where folded panels meet. Such tears, once started, often can spread, resulting in the separation of carton panels and ultimately in carton blowout. Attempts to address this problem have included providing double folding flaps and/or tongues in carton blanks to reinforce the corners and, in some cases, gluing special corner reinforcements in cartons to inhibit tearing. Such attempts have not been completely successful. [7:11 – 7:21]

In contrast, in the present invention, with specific reference to Fig. 1 of the present application, as a web of paperboard 17 is advanced along a processing path, one or more ribbons of reinforcing material 21, each having a width less than the width of the paperboard web 17, is progressively applied to the web 17. [18:12 – 18:14] Each ribbon 21 preferably is applied with adhesive to the side of the web 17 that will become the inside of the finished cartons and is positioned at a predetermined location across the width of the web 17. [25:16 – 26:2] The location of each ribbon 21 is selected to provide one or more layers or laminations of material, as indicated in Figs. 2 and 6a-6h at 67; 73; 77 and 78; 81; 83 and 84; 87 and 88; 92 and 93; and 97; applied in specific regions of finished cartons where enhanced strength and/or rigidity will be

required such as, for example, in the side walls of the carton. [24:19 – 24:24; see also Figs. 3, 7, 8] Preferably, the ribbons of reinforcing material 21 also are formed of paperboard and further can be pre-cut or slit to desired widths from paperboard trim or cull that otherwise may have reduced value. [19:8 – 19:11] As indicated in Fig. 1, the ribbons 21 generally are drawn from rolls that are pre-positioned to locate the ribbons 21 properly on the web 17, advanced along and adjacent to the path of the web 17, supplied with adhesive on one side, and progressively brought into engagement with and compressed against the advancing paperboard web 17 to adhere the ribbons 21 to the web 17. [21:4 – 23:7] In one embodiment, one or more of the ribbons 21 may be pre-printed on one or both sides with application specific indicia that ultimately will be exposed on the inside of finished cartons. [17:18 – 17:24; see also Figs. 7 and 8]

After the reinforcing ribbons 21 are laminated to the advancing web 17, the web 17 may be cut into sheets 39 of a predetermined size. [23:12 – 23:15] The sheets 39 subsequently may be die-cut and scored with fold lines 27 as required to form carton blanks defining the various panels and tabs that ultimately will become the walls of finished cartons. [24:5 – 24:15] In this regard, unique multi-width fold lines 27 may be formed where a fold line transitions across the edge of a reinforcing ribbon 21. [20:6 – 21:3; see also Figs. 7-9] Such multi-width fold lines 27 may be scored according to the invention with equally unique multi-point scoring rules in a platen or in-line rotary die cutter 28. [24:5 – 24:11] The cut and scored carton blanks 51 may be palletized and shipped to packagers, where the blanks 51 are converted into cartons and packed with articles such as, for example, beverage containers or food items. [24:11 – 24:15] When converted to cartons, the previously positioned and applied paperboard reinforcing ribbons 21 form multiple layers or laminations of paperboard in selected portions of the cartons such as, for example, as shown in Figs. 2-9, in their sides, where enhanced structural integrity is required.

[25:22 – 26:23] By appropriately selecting, sizing, and positioning the reinforcing ribbons 21, paperboard cartons having strength and rigidity comparable or superior to that provided by cartons made of micro-flute are obtained. [25:9 – 25:13] Further, through judicious use of trim and cull in making the reinforcing ribbons, paperboard cartons made by the method of the present invention can be economically viable alternatives to cartons made of micro-flute. [10:16 – 11:16]

ISSUES

1. At issue in the present appeal is whether claims 1-5, 7, 11, and 33-37 have been properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Campbell (U.S. Patent No. 1,600,396) in view of Seufert '916 (U.S. Patent No. 4,733,916); whether claim 6 has been properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Campbell and Seufert '916 and further in view of Seufert '206 (U.S. Patent No. 4,064,206); and whether claims 8-10 and 12-15 properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Campbell and Seufert '916 and further in view of Haddock (U.S. Patent No. 3,735,674).

GROUPING OF CLAIMS

The rejections under 35 U.S.C. § 103(a) of claims 1-15 and 33-37 presently pending in this case are based upon the same combination of references, namely Campbell and Seufert '916, and accordingly it is submitted that claims 1-15 and 33-37 should be grouped together.

ARGUMENT

A. The rejections of claims 1-15 and 33-37 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Campbell (U.S. Patent No. 1,600,396) and Seufert '916 (U.S. Patent No. 4,733,916) are improper and should be reversed.

The July 10, 2003 Final Office Action maintained the base rejections of Claims 1-5, 7, 11, and 33-37 under 35 U.S.C. § 103(a) as being unpatentable over Campbell in view of Seufert

'916, and further rejected Claim 6 as being unpatentable over the combination of Campbell and Seufert '916 and further in view of Seufert '206, and Claims 8-10 and 12-15 as being unpatentable over Campbell and Seufert '916 and further in view of Haddock. The basic test for non-obvious subject matter is whether the claimed subject matter would have been obvious to a person having ordinary skill in the art to which the subject matter pertains in contemplation of the prior art. The United States Supreme Court in Graham v. John Deere & Co., 383 U.S. 1 (1966), set forth the factual inquiries to be considered:

(1) determining the scope and contents of the prior art;
(2) ascertaining the differences between the prior art and the claims at issue;
(3) resolving the level of ordinary skill in the pertinent art.

In determining the scope and content of the prior art, the Examiner must first consider the nature of the problem on which the inventor was working. Once this has been established, the Examiner must select, for purposes of comparing and contrasting with the claims at issue, prior art references that are reasonably pertinent to that problem (e.g., the inventor's field of endeavor). See Heidelberger Druckmaschinen AG v. Hantscho Commercial Products, Inc., 21 F.3d 1068, 1071 (Fed. Cir. 1994). In selecting and applying/combining references, hindsight must be avoided at all costs.

The second factor described in Graham requires ascertaining the differences between the cited prior art and the claims at issue. In the instance case, the references fail to disclose the claimed invention, that is, claimed elements are absent.

In resolving the level of ordinary skill in the pertinent art, as required by the third factor of Graham, the Examiner must place himself into the shoes of a person of ordinary skill in the art at the time the invention was made. The hypothetical person skilled in the art is one who thinks along lines of conventional wisdom in the art and one who does not have the benefit of hindsight.

In order to establish a *prima facie* case of obviousness, it is necessary for the Examiner to present evidence, preferably in the form of some teaching, suggestion, incentive, or inference in the applied prior art, or in the form of generally available knowledge that one having ordinary skill in the art would have been led to combine the relevant teachings of the applied references in the proposed manner to arrive at the claimed invention. Ex parte Levengood, 28 USPQ2d 1300, 1301 (Bd. Pat. App. & Interf. 1993); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 227 USPQ 657 (Fed. Cir. 1985). The legal conclusion of obviousness must be supported by facts or it cannot stand. See Graham. A rejection based on 35 U.S.C. § 103(a) therefore clearly must rest on a factual basis, and these facts must be interpreted without hindsight reconstruction of the invention from the prior art or "viewed after the event." Goodyear Co. v. Ray-O-Vac Co., 321 U.S. 275, 279, 64 S.Ct. 593, 88 L.Ed. 721 (1944). The proper inquiry thus is whether bringing the references together was obvious and not, whether one of ordinary skill, having the invention before him, would find it obvious through hindsight to construct the invention. Accordingly, an Examiner cannot establish obviousness by locating references that describe various aspects of the pending application's invention without also providing evidence of the motivating force that would lead one skilled in the art to do what the inventor has done.

I. Campbell and Seufert '916 Lack a Motivation to Combine

The Examiner avers on page 2 of the Final Office Action that:

> "Campbell, et al. disclose a method of reinforcing paperboard made of paper from rolls 1, 2, and 3. Reinforcing tapes 8 are applied. The blanks are scored by scoring rolls (not shown).
>
> Campbell does not directly disclose scoring fold lines with a section of the transverse fold line wider than another section, however Seufert teaches a method of making a reinforced paperboard container with the reinforcing material 3 with a width less than that of the paperboard 1. The reinforcing

material 3 is glued to the paperboard 1 and then the blank is scored with fold lines 12, 13. Fold line 13 has a wider section 17 with a transition zone in between; see Figs. 1 and 3.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include the teachings of Seufert in the invention of Campbell in order to compensate stresses in the laminate materials when folded into the final product and thereby maintaining the bond between the laminates."

Applicants traverse the Examiner's rejection because the Campbell and Seufert '916 references cannot be combined as averred, and, in the event such a combination could be made, the resulting combination would not satisfy the metes and bounds of the claim.

As noted in Applicant's prior response and as acknowledged by the Examiner in the Official Action, to establish a *prima facie* case of obviousness for combining or modifying the teachings of prior art to produce the claimed invention, there must be a showing or some teaching, suggestion or motivation to make such combination found either in the references themselves or in the knowledge generally available to one of skill in the art. In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In the present case, no such suggestion to combine the folding display box of Seufert '916 with the method of reinforcing fiberboard taught by Campbell et al. has been offered or shown in the rejection of the currently pending claims. The Examiner instead continues to perform a piecemeal rejection of the claims by arguably finding pieces of the claimed elements in separate pieces of art and simply stating that it would have been obvious to combine the two references without showing a proper suggestion or motivation to combine, merely stating on page 5, "Furthermore, Seufert discloses more than merely producing receptacles with windows; see column 6, lines 37-42." Applicants, however, have searched this passage, which states:

The invention is basically applicable to all types of folding boxes and other foldable packaging units, as for instance foldable slip-on

> covers; this to the extent that overlap between cardboard and plastic foil occurs in the area of box edges.

Applicants are wont to find how this passage provides the suggestion or teaching to justify the combination of Campbell with Seufert '916. Applicants thus continue to aver that the Examiner has not fulfilled his burden of showing that there exists a teaching or suggestion to combine Campbell with Seufert '916 and that rejections based thereupon are moot.

II. The Proposed Combination would be Contrary to the Teachings of Campbell and Seufert '916.

In order to make a case of obviousness, "a prior art reference must be considered in its entirety, i.e. as a whole, including portions that would lead away from the claimed invention." W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). Thus, in trying to combine Campbell et al. and Seufert '916, both references must be considered in their entireties for all that they teach, including specific disclosures that advocate or teach away from the claimed invention and each other. It is not permissible to choose isolated teachings or disclosures in such references in order to try to make a claim of obviousness under § 103. See MPEP § 2142.02; In Re Antonine, 559 F.2d 618, 195 USPQ 6 (CPA 1977). In the present case, the cited references teach and disclose very different types of products, i.e. Campbell et al. teaches a box with a series of tapes applied along sections of fold lines, while Seufert '916 discloses a folding display box with a thin, transparent thermoplastic material, which, though attached at its edges to cardboard, does not act as a reinforcing member, nor is it indicated as performing a reinforcing function in Seufert '916. In addition, the references appear to teach away from each other in the manner of formation of the boxes shown therein.

Campbell et al. illustrates and discloses a process for reinforcing fiberboard for use in making shipping cases, cartons, and packing sheets. A specific requirement of Campbell is that, only after the reinforcing tapes are applied to the carton blank, is the scoring done, before the bond between the tapes and the carton or container blank has had a chance to dry so that the tapes are free to slip when scoring is done to prevent distortion and cracking of the adhesive bonding the tapes to the paper during scoring. By contrast, Seufert '916 teaches the formation of thinned down areas in the plastic foil blank 3 to compensate for stresses in the foil material, which can be formed concurrently with the formation of the bend lines 13 in the plastic foil material. However, the thinned down areas are formed in the foil before its application to the cardboard blank. (See Col. 2, l. 57 – 63). Seufert '916 further requires that such previously formed bend lines or fold lines 13 formed in the foil material must be precisely aligned with groove lines already scored in the cardboard blanks. Consequently, there is no need for subsequent scoring of the transparent plastic foil material and cardboard of Seufert '916 after the transparent plastic foil material has been applied to the cardboard blank.

Indeed, the scoring taught by Campbell et al. necessarily must be done after application of the tapes to the fiberboard material while the glue between the tape and fiberboard material has dried to enable shifting or movement of the two pieces. This required allowance for shifting or movement would appear to affect or diminish the precise alignment of the bend lines of the foil material with the fold lines of the cardboard as stated to necessarily be required by Seufert '916. Also, from the drawings such as shown in Fig. 12, it appears that when the blank of Seufert '916 is folded, the foil material 3 will tend to bend inwardly and away from the cardboard as shown in Fig. 12 to compensate for stresses applied thereto by bending rather than acting to reinforce the blank as required by Campbell et al. Thus, the methods of forming the boxes or blanks as taught

by these references seem to teach away from each other and away from any suggestion to try to combine their teachings.

Further, attempting to combine all the teachings of Seufert '916 with the method of Campbell et al., as required under the law of obviousness, would require that critical or expressly required steps of Campbell et al. be omitted in order to either apply a transparent plastic foil window taught by Seufert '916 along an edge to form a wall of the box or about a cut-out portion of a cardboard blank to form a window, and then scoring it, contrary to the teachings of Seufert '916. Alternatively, such a combination would require the thinned down plastic material be applied over already scored fold lines, which is contrary to Campbell, et al. As such, the proposed modification would render these references unsatisfactory for their intended purposes and thus is not a proper combination. (See MPEP § 2143.02). Still further, Campbell et al. also teaches that cut-out portions 10 are stamped or formed in the cardboard blank, which would also appear to create additional holes in the foil and further reduce or affect whatever strength exists with the plastic foil material of Seufert '916, which has already been thinned down to approximately 40-60 μm.

As discussed, Campbell teaches a method of reinforcing fiberboard that specifically requires applying a reinforcing tape to the carton blank before scoring. The scoring is then performed while the tape is not dry so that the tape is free to slip when the scoring is performed to prevent distortion and cracking of the adhesive bonding. In contrast, Seufert '916 teaches the formation of a thinned down area in a plastic foil blank and the precise aligning of the thinned down area over groove lines already scored in the cardboard blanks. The Examiner avers that the plastic foil of Seufert '916 is a reinforcement material with one section wider than an other section as claimed. The Examiner then states that the presently claimed invention thus would

have been obvious to one of ordinary skill in the art in view of the combination of the Campbell and Seufert '916 references. However, according to MPEP 2143.02, a proposed modification to a reference cannot render the prior art unsatisfactory for its intended purpose and cannot change the principle of operation of a reference. As applied herein, Applicant submits that the proposed combination would be contrary to the teachings of Campbell and Seufert '916 and the claimed methods are thus not obvious in view of a combination of these references.

Applicant avers that such a combination of Campbell and Seufert '916 is not possible and, even if such a combination were somehow made, that such a combination would not result in the claimed method. If the methods of Campbell and Seufert '916 were somehow combined, the combination would result in either a plastic film with thinned down areas at joint or bending regions that is applied as a reinforcement before scoring of the fiberboard and the thinned down areas of the plastic film, which accordingly will lose its stress equalization properties or would result in a plastic film that is applied to an unscored fiberboard and thereafter scored before the glue has dried, enabling shifting or movement of this foil out of alignment with the resultant formed fold lines of the fiberboard. Neither of these combinations is permissible in view of the Campbell or Seufert '916 references and neither of these combinations satisfies the claimed method.

The Campbell reference specifies in column 2, lines 81-86 that:

> It is the essential feature of our invention that tapes are so placed into a carton or container blank as to re-enforce the score lines, and the scoring is done while the bond between the tapes and the paper is not dry, but is free to slip when scoring is done.

Campbell thus requires the reinforcement material must be applied before scoring is performed. A combination of the Campbell and Seufert '916 references to attempt to reach the claimed

method would require the use of the foil material of Seufert '916 as the reinforcing material as relied upon in the Office Action. The foil material of Seufert '916 has thinned down sections at the areas that would have to be applied in place of the tape of Campbell before scoring is performed. However, this combination of Seufert '916's foil in Campbell's method would result in a thinned down foil that is then scored again, which would weaken the foil and cause it to lose its purpose of uniform stress equalization. Thus, substituting the foil of Seufert '916 in place of the tape of Campbell would be contrary to the stated purpose of Seufert '916 and would be improper.

Alternatively, if the method of Seufert '916 were applied to the blank of Campbell, such combination would require the tape of Campbell to be used in place of the plastic film, and placed on a prescored fiberboard, which seemingly would destroy the display ability and function of Seufert '916 by removing the plastic used for covering a display window or forming the clear wall for display and replacing it with a cardboard tape. This combination further would result in a scored fiberboard overlaid with a tape that has not been scored, which is clearly contrary to both the Seufert '916 and Campbell references and does not result in the claimed method.

Thus, Applicant avers that the combination of the teachings of the Campbell and Seufert '916 references to try to form the claimed invention is not possible and, even if such a combination were somehow made, that such a combination would not result in the claimed method.

III. The Transparent Foil of Seufert '916 Does Not Act as a Reinforcing Material as Required by Campbell.

In addition, contrary to the rejection, Seufert '916 does not appear to disclose that the transparent plastic foil is a reinforcing material or performs a reinforcing function such as

performed by the tapes shown in Campbell et al., so as to be able to be substituted therefore. Indeed, given the thickness of the foil of between 40-60 μm at its thinned downed regions, it is respectfully submitted that such material clearly is not designed to be a reinforcing material as taught by the claimed invention or as envisioned by Campbell et al. Still further, the reference to column 6, lines 37-42, in the Official Action does not support an interpretation of Seufert '916 as disclosing other types of boxes, much less that the plastic foil that is thinned down before its application to a cardboard blank at a cut-out section or along one edge thereof performs any reinforcing function. In fact, this passage limits the application of Seufert '916 to other "foldable packaging units, as for instance foldable slip-on covers ... to the extent that the overlap between the cardboard and plastic foil occurs in the area of box edges." (See col. 6, ln. 39-42 (emphasis added)). Accordingly, the disclosure of Seufert '916 does not teach or suggest a method of making a reinforced paperboard container with a reinforcing material as asserted by the Final Office Action, but rather is specifically directed to display type boxes. It therefore is submitted that there is no suggestion to combine or form the transparent plastic material of Seufert '916 with the method of Campbell et al. to form a reinforced fiberboard blank.

Accordingly, it is respectfully submitted that there is no suggestion or motivation to combine the teachings of Campbell et al. and Seufert '916 when considered as a whole for all that they teach. Even if such a combination were made, it would still not be successful at trying to form the claimed invention as the two references teach vastly different types of products that are assembled in divergent manners or methods such that these references appear to teach away from one another. Applicant, therefore, respectfully requests that this rejection be reconsidered and withdrawn and that claims 1-5, 7, 11 and 33-37 as now pending are patentable over the cited combination of references.

Claim 6 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Campbell et al. in view of Seufert '916 as applied to claims 1-5, 7, 11 and 33-37, and in further view of Seufert '206. Applicant respectfully submits that claim 6, which depends from claim 5, likewise is allowable over the cited art of record for the reasons discussed above with reference to Claims 1-5. Accordingly, it is respectfully requested that this rejection be withdrawn and that claim 6 is patentable under 35 U.S.C. § 103(a) over the cited art of record.

Claims 8-10 and 12-15 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Campbell et al. in view of Seufert '916 as applied to claims 1-5, 7, 11 and 33-37 and in further view of Haddock. As discussed above with reference with claims 1-5, 7, 11 and 33-37, it is submitted that there is no suggestion or motivation, nor has any such suggestion or motivation been shown to support the combination of the teachings of Campbell et al. in view of Seufert '916. It is therefore submitted that claims 8-10 and 12-15 are not made obvious by and thus are patentable over the cited combination of references, and it is respectfully submitted that this rejection be withdrawn.

V. Conclusion.

Claims 1-5, 7, 11, and 33-37 are not rendered obvious by Campbell in view of Seufert '916 under 35 U.S.C. § 103(a). Claim 6 is not rendered obvious by Campbell in view of Seufert '916 and in further review of Seufert '206 under 35 U.S.C. § 103(a). Additionally, Claims 8-10 and 12-15 are not rendered obvious by Campbell in view of Seufert '916 and in further review of Haddock under 35 U.S.C. § 103(a).

For the foregoing reasons, the rejections of Claims 1-15 and 33-37 by the U.S. Patent and Trademark Office are in error. Reversal of the rejections and allowance of the application is respectfully requested.

Respectfully submitted,

11/3/03
Date

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APPENDIX

1. A method of making reinforced paperboard cartons comprising the steps of:

   (a) advancing a web of paperboard along a path, the web of paperboard having a width;

   (b) progressively applying at least one ribbon of reinforcing material to the advancing web of paperboard to form a reinforced region for the carton, the ribbon having a width less than the width of the web of paperboard and an edge;

   (c) scoring fold lines in the web of paperboard, at least one of the fold lines extending transversely to the reinforcing region and crossing the edge of the ribbon of reinforcing material to define a fold line having a first section within the reinforced region and a second section outside the reinforced region, the first section of the fold line being wider than the second section of the fold line; and

   (d) forming a transition zone between the first and second sections of the fold line.

2. The method of claim 1 and where in step (e) the transition zone comprises a widening of the fold line from the narrower second section of the fold line to the wider first section of the fold line.

3. The method of claim 2 and where in step (e) the fold line widens smoothly from the second to the first sections of the fold line.

4. The method of claim 2 and wherein the edge of the reinforcing ribbon is located within the transition zone nearer the wider portion of the fold line.

5. The method of claim 1 and wherein step (c) further comprises impressing the paperboard with a multi-point scoring rule having a narrower section outside the reinforced region and a wider section inside the reinforced region.

6. The method of claim 5 and wherein the scoring rule is part of a platen die cutter.

7. The method of claim 5 and wherein the scoring rule is part of an in-line rotary die cutter.

8. The method of claim 5 and wherein step (c) further comprises locating a counter plate beneath the scoring rule, the counter plate being formed with a groove aligned with the scoring rule, the groove having a narrower section aligned with the narrower section of the scoring rule and a wider section aligned with the wider section of the scoring rule.

9. The method of claim 8 and where in step (e) the transition zone is formed by gradually widening the groove in the counter plate from its narrower section to its wider section.

10. The method of claim 9 and wherein the junction between the narrower and the wider sections of the scoring rule is aligned with the wider end of the transition zone.

11. A method of scoring a fold line in a paperboard carton blank having a base sheet of paperboard and a reinforced region formed by a reinforcing ribbon laminated to the base sheet wherein the fold line extends transversely to the reinforced region and transitions from outside the reinforced region to inside the reinforced region, the method comprising the steps of:

(a) providing a multi-point scoring rule having a narrower first section for scoring the portion of the fold line outside the reinforced region and a wider second section for scoring the portion of the fold line within the reinforced region; and

(b) impressing the paperboard carton blank with the multi-point scoring rule to form the fold line in the paperboard carton blank.

12. The method of claim 11 and where in step (b) the paperboard carton blank is sandwiched between the multi-point scoring rule and a counter plate, the counter plate formed with a groove aligned with the scoring rule with the groove having a narrower section aligned with the narrower section of the scoring rule and a wider section aligned with the wider section of the scoring rule.

13. The method of claim 12 and wherein the groove in the counter plate is further formed with a transition region between its narrower section and its wider section to form a fold line with a corresponding transition region at the edge of the reinforcing ribbon.

14. The method of claim 13 and wherein the transition region of the groove comprises a gradually widening section of the groove from its narrower section to its wider section.

15. The method of claim 14 and wherein the transition region of the groove is about .125 inches long.

33. A method of making reinforced paperboard carton blanks comprising the steps of:

(a) advancing a web of paperboard along a path, the web of paperboard having a width;

(b) advancing at least one ribbon of reinforcing material along a path, said reinforcing material having a width less than the width of said web of paperboard;

(c) progressively deforming the ribbon of reinforcing material;

(d) progressively laminating the deformed ribbon of reinforcing material to the web of paperboard to form a reinforced paperboard carton blank; and

(e) forming fold lines across the web of paperboard and reinforcing material.

34. The method of claim 33 and wherein step (c) comprises passing the ribbon of reinforcing material between a pair of impression cylinders.

35. The method of claim 34 and wherein the surfaces of said impression cylinders are configured to form an array of perforations in said ribbon of reinforcing material.

36. The method of claim 34 and wherein the surfaces of said impression cylinders are configured to form longitudinal flutes in said ribbon of reinforcing material.

37. The method of claim 34 and wherein the surfaces of said impression cylinders are configured to form transverse corrugations in said ribbon of reinforcing material.